

# MCR-PT100-U-DC - Resistance thermometer measuring transducer



2810311

<https://www.phoenixcontact.com/us/products/2810311>

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MCR temperature transducer, for Pt 100, 2-, 3-, 4-conductor technology; input: 0 ... 100°C, 0 ... 150°C, 0 ... 200°C, 0 ... 300°C, -50 ... +50°C, -50 ... 100°C, -50 ... 150°C, -50 ... 250°C, output signal: 0 ... 10 V, electrically isolated auxiliary power

## Your advantages

- With electrically isolated supply voltage as an option
- ZERO/SPAN adjustment
- Temperature range can be set via DIP switches
- Wire-break detection

## Commercial data

Item number	2810311
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C401
Product key	CK1821
Catalog page	Page 138 (C-7-2013)
Weight per piece (including packing)	138.4 g
Weight per piece (excluding packing)	138.4 g
Customs tariff number	85437090
Country of origin	DE

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## Technical data

### Notes

#### Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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### Product properties

Product type	Temperature transmitter
No. of channels	1

### Electrical properties

Alignment span	± 5 %
Alignment zero	± 5 %
Limit frequency (3 dB)	30 Hz
Test voltage power supply/signal	750 V AC (50 Hz, 60 s)
Step response (10-90%)	11 ms
Maximum temperature coefficient	≤ 0.02 %/K
Maximum transmission error	≤ 0.4 % (of final value)

#### Supply

Nominal supply voltage	24 V
Supply voltage range	20 V DC ... 30 V DC
Max. current consumption	35 mA

### Input data

#### Signal

Input signal	Temperature
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#### Measurement

Configurable/programmable	Yes
Sensor types (RTD) that can be used	Pt 100 (IEC 60751/EN 60751)
Temperature measuring range	0 °C ... 300 °C (0 ... 100/150/200/300) -50 °C ... 250 °C (-50 ... 50/100/150/250)
Sensor type:	-50 °C ... 50 °C (fixed setting) -50 °C ... 100 °C (fixed setting) -50 °C ... 150 °C (fixed setting) -50 °C ... 250 °C (fixed setting) 0 °C ... 100 °C (fixed setting) 0 °C ... 150 °C (fixed setting) 0 °C ... 200 °C (fixed setting) 0 °C ... 300 °C (fixed setting)

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Sensor input current	approx. 1 mA
Connection technology	2-, 3-, 4-conductor
Connection method	Pluggable screw connection

## Output data

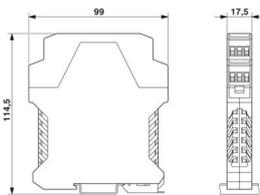
Signal: Voltage output

Voltage output signal	0 V ... 10 V
Max. voltage output signal	15 V
Output voltage with wire break	> 11 V
Load/output load voltage output	≥ 10 kΩ

## Connection data

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section rigid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG	24 ... 14

## Dimensions

Dimensional drawing	
Width	17.5 mm
Height	99 mm
Depth	114.5 mm

## Material specifications

Color	green (RAL 6021)
Housing material	Polyamide PA non-reinforced

## Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 65 °C

## Approvals

CE

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Certificate	CE-compliant
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UL, USA/Canada

Identification	UL 508 Recognized
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## Mounting

Mounting position	any
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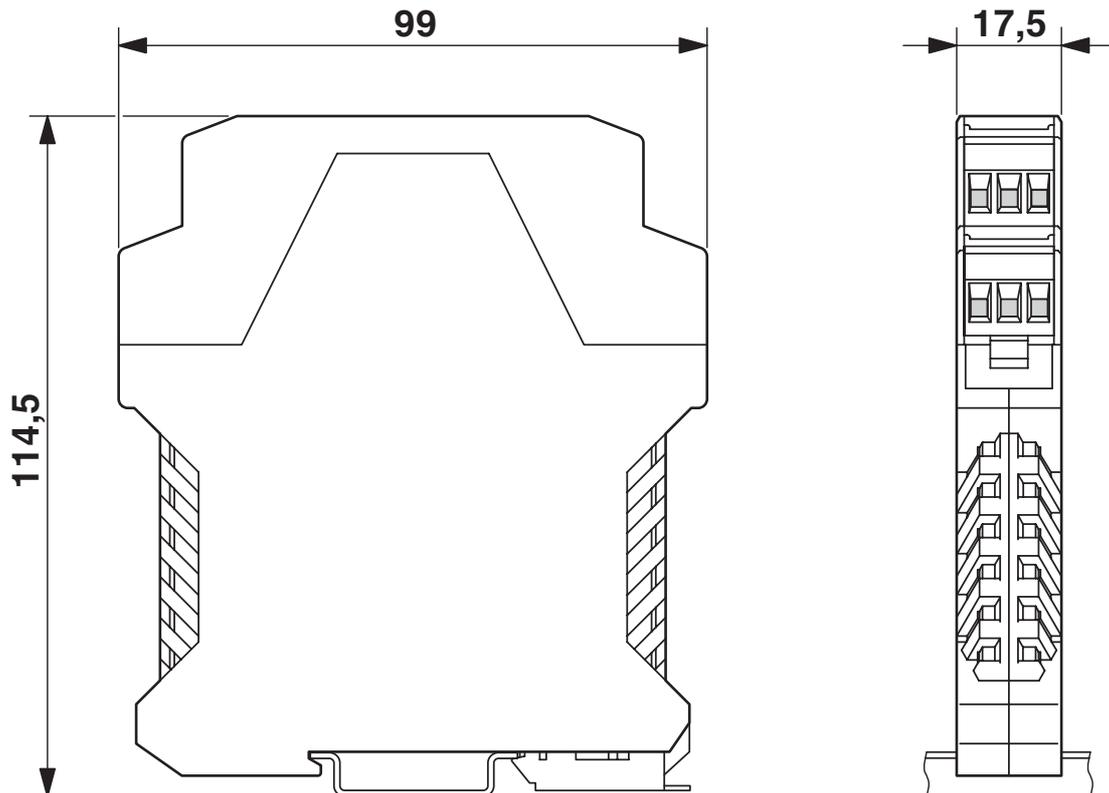
# MCR-PT100-U-DC - Resistance thermometer measuring transducer

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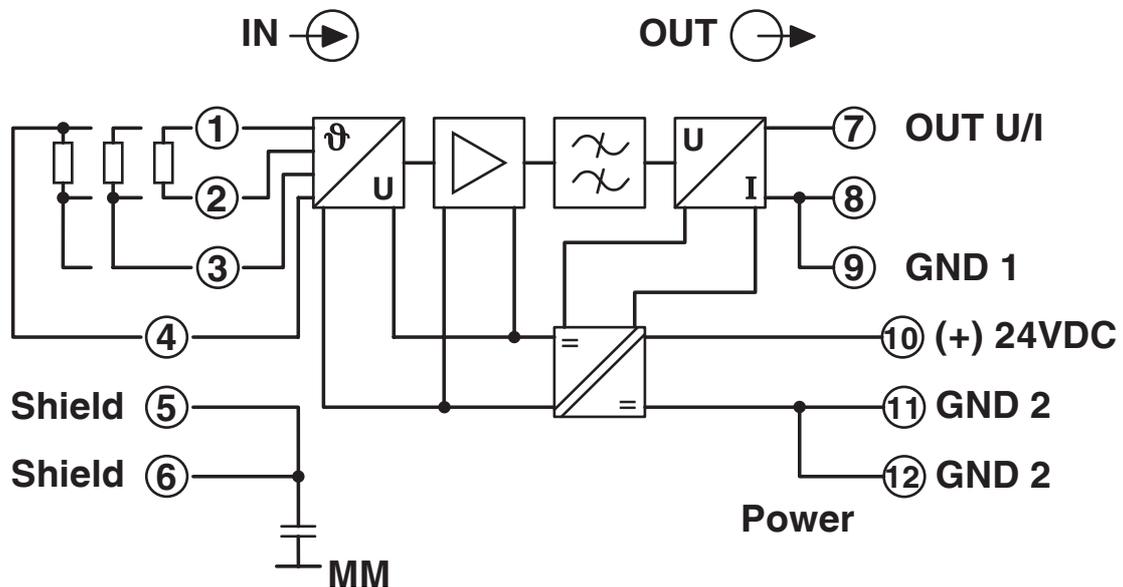
<https://www.phoenixcontact.com/us/products/2810311>

## Drawings

Dimensional drawing



Circuit diagram



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## Classifications

### ECLASS

ECLASS-11.0	27210129
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## Environmental product compliance

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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